REMARKS

Status of the Claims

Claims 1-30 have been examined. Claims 1-21 and 24-30 stand rejected. By this Amendment, Applicant cancels claim 21 without prejudice or disclaimer. Therefore, claims 1-20 and 22-30 are all the claims pending in the application.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 22 and 23 would be allowable if rewritten in independent form. However, Applicant respectfully requests the Examiner to hold in abeyance such rewriting until the Examiner has had an opportunity to reconsider and withdraw the prior art rejection of the other claims.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 7-10, 13-17, 20-21, 24-25, 27 and 29 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Wu et al: (US Patent Application Publication No. 2006/0193387 A1). For *at least* the following reasons, Applicant respectfully traverses the rejection.

Claim 1

In rejecting claim 1, the Examiner contends that Wu teaches all the elements of claim 1. However, Applicant respectfully submits that claim 1 is not anticipated by Wu. Claim 1 recites, *inter alia*, preparing tag information describing a plurality of pictures, and determining one of the plurality of pictures to be the reference picture by referring to the tag information.

The Examiner cites paragraphs 9 and 39 as teaching the above claimed features. Applicant respectfully disagrees.

It appears that the Examiner relies on the tagging in Wu as teaching the tag information in claim 1. However, in paragraph 9 of Wu, Wu states that a user can "tag a parent and see the child(ren) frames in finer level. Tagging frames in the finest level result in playback of the video." The tagging that occurs in Wu is directed towards the selection of frames by a user, and has nothing to do with determining a reference picture among a plurality of pictures based on the tag information as required by claim 1. Although Wu discloses generating a hierarchal summary based on keyframes of a video sequence, this hierarchal summary is not referred to determine any reference picture. Rather, the hierarchal summary is used to determine "the most salient frames of a given video sequence that may be used as a representative of the video" and the "summary also facilitates fast browsing through a database of video sequences where browsing may be performed on the basis of the most compact summary and progressive refinement of the summary to more detailed levels may be performed at user's request" (see col. 3, lines 26-28 and lines 48-53 of U.S. Patent No. 5,995,095 which is cited in paragraphs 8 and 9 of Wu).

Furthermore, with respect to paragraph 39, Wu teaches "a target macro-block in a frame to be encoded is matched with a most similar displaced macro-block in a previous (or consecutive) frame, called a reference image". That is, Wu's reference block is a most similar displaced macro-block in a previous (or consecutive) frame, but this reference frame is not determined by referring to any tag information, which describes a plurality of pictures as required by claim 1.

In view of the foregoing, Applicant respectfully submits that Wu fails to disclose determining one of the plurality of pictures to be the reference picture by referring to the tag information, where the tag information describes a plurality of pictures. Accordingly, Applicant

respectfully submits that claim 1 is not anticipated by Wu, and respectfully requests the

Examiner to withdraw the 35 U.S.C. § 102(e) rejection.

Applicant respectfully submits that claims 2-7 are patentable *at least* by virtue of their

dependency on claim 1.

Claim 8

In rejecting claim 8, the Examiner contends that Wu teaches all the elements of claim 8.

However, Applicant respectfully submits that claim 8 is not anticipated by Wu. Claim 8 recites,

inter alia, "monitoring the determined reference picture, and determining a reference picture for

blocks constituting another portion of the current picture based on a result of the monitoring

process."

The Examiner cites paragraphs 32 and 39-42 of Wu as teaching the above claimed

feature.

Wu is directed to a key frame extraction method. A video sequence in Wu's invention

comprises compressed video data having motion vectors. The method comprises the steps of

generating global motion signals based on the motion vectors, generating dominant global

direction clusters based on the generated global motion signals, selecting key frames using the

generated dominant global direction clusters, and decompressing the selected key frames to

obtain said extracted key frames (Wu, para. 11).

Wu's global motion signals consist of three parameters: a pan parameter x, a tilt

parameter y, and a zoom parameter z (Wu, para. 43). Figures 5A-5C of Wu show examples of

these global pan, tilt and zoom parameters, respectively. Figure 5D is an example of a dominant

global direction cluster in which the key frames are selected. Applicant respectfully submits, however, that Wu's key frames do not disclose the claimed reference pictures because the key frames are merely the starting and ending point of any smooth transition in a video sequence (see Wu, paras. 6 and 9, and U.S. Patent No. 5,995,095, col. 2, lines 30-37). That is, these key frames are completely irrelevant to a reference picture used in a motion estimation process as set forth in claim 8.

Furthermore, as discussed above with respect to claim 1, Wu discloses that during the partial decompression of data, a motion estimation process is performed and "a target macro-block in a frame to be encoded is matched with a most similar displaced macro-block in a previous (or consecutive) frame, called a reference image" (para. 39). As such, the reference image in Wu is determined using the conventional multiple reference scheme and fails to disclose any monitoring of the determined reference picture, much less determining a reference picture for blocks constituting <u>another</u> portion of the current picture <u>based on a result of the monitoring process</u> as recited in claim 1.

In view of the above, Applicant respectfully submits that claim 8 is not anticipated by Wu. Accordingly, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 102(e) rejection.

Applicant respectfully submits that claims 9-13 are patentable *at least* by virtue of their dependency on claim 8.

<u>Claims 24, 27 and 29</u>

Independent claims 24, 27, and 29 recite features similar to those discussed above with respect to claim 8. Thus, Applicant respectfully submits that claims 24, 27, and 29 are patentable

at least for reasons analogous to those discussed above regarding claim 8. Applicant further submits that claims 25, 26, 28, and 30 are patentable *at least* by virtue of their dependency.

Claim 14

Claim 14 recites, *inter alia,* if a resulting value of the motion estimation process is more than a predetermined threshold value, determining the reference picture by using pictures indicated by the reference index list, wherein the determining the reference picture comprises preparing the reference index list.

It appears that the Examiner again relies on Wu's teachings in paragraphs 37-39 to disclose the claimed feature above. Applicant respectfully disagrees.

Wu fails to disclose this feature because there is no check in Wu's technique in the cited portions as to whether a resulting value of the motion estimation process is more than a predetermined threshold value, and if so, determining the reference picture based on pictures indicated by the reference index list.

As shown above, the cited portions of Wu disclose a known multiple reference scheme, which does not use any pictures indicated by a <u>reference index list</u>. Moreover, claim 14 recites that the reference index list is <u>prepared</u> and used <u>only if the resulting value of the motion estimation process is more than predetermined threshold value,</u> and such a check is never performed in Wu's disclosed motion estimation technique.

In view of the above, Applicant respectfully submits that claim 14 is not anticipated by Wu. Accordingly, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 102(e) rejection.

Applicant respectfully submits that claims 15-20 are patentable *at least* by virtue of their dependency. Since claim 21 has been canceled, the rejection thereto is rendered moot.

Claim Rejections - 35 U.S.C. § 103

Claims 2-3, 5-6, 10-12, 17-19, 26, 28 and 30 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Wu in view Gelissen (US Patent Publication No. 2005/0114887 A1).

Claims 2-3, 5-6, 10-12, 17-19, 26, 28 and 30 depend from claims 1, 8, 14, 27, or 29. Since Gelissen does not cure the deficient teachings of Wu with respect to claims 1, 8, 14, 27, and 29 Applicant respectfully submits that claims 2-3, 5-6, 10-12, 17-19, 26, 28 and 30 are patentable *at least* by virtue of their dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

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